Listing of Claims

1-55.   Cancelled

56.   (Previously Presented) A computer-implemented method comprising:
associating an item with a class, wherein

> the class comprises associated attributes that describe members of the class, and
>
> said associating the item comprises selecting the class such that each associated
>> attribute has a non-null value in describing the item;

storing a first record associating the item with the selected class; and

storing a second record associating the item with each associated attribute of the class and
> a value of the attribute describing the item.

57.   (Previously Presented) The computer-implemented method of Claim 56 wherein
said selecting the class further comprises:

> selecting the class from a class hierarchy, wherein the class hierarchy comprises
>> child classes and associated parent classes, and
>>
>> a child class inherits each attribute of the associated parent class.

58.   (Previously Presented) The computer-implemented method of Claim 57 wherein
the associated attributes of a child class further comprise an additional set of attributes not
inherited from the associated parent class.

59.   (Previously Presented) The computer-implemented method of Claim 58 wherein
said selecting the class further comprises:

> determining a class in the hierarchy that has associated attributes necessary to describing
>> the item.

60.   (Previously Presented) The computer-implemented method of Claim 56, wherein

said storing the first record is to a first memory structure, and

said storing the second record is to a second memory structure.

61.   (Previously Presented) The computer-implemented method of Claim 60 wherein

the first and second memory structures are distinct from one another.

62.   (Previously Presented) The computer-implemented method of Claim 60 wherein

the first and second memory structures are tables in a database.

63.   (Previously Presented) The computer-implemented method of Claim 56 wherein

the associated attributes are metadata of the class.

64.   (Previously Presented) An apparatus comprising:

means for associating an item with a class, wherein

       the class comprises associated attributes that describe members of the class, and

       said means for associating the item comprises means for selecting the class such

              that each associated attribute has a non-null value in describing the item;

means for storing a first record associating the item with the selected class; and

means for storing a second record associating the item with each associated attribute of

       the class and a value of the attribute describing the item.

65.   (Previously Presented) The apparatus of Claim 64 wherein said means for

selecting the class further comprises:

means for selecting the class from a class hierarchy, wherein the class hierarchy

       comprises

       child classes and associated parent classes, and

       a child class inherits each attribute of the associated parent class.

66.   (Previously Presented) The apparatus of Claim 65 wherein the associated

attributes of a child class further comprise an additional set of attributes not inherited from the

associated parent class.

67.　(Previously Presented)　The apparatus of Claim 66 wherein said means for selecting the class further comprises:

　　　means for determining a class in the hierarchy that has associated attributes necessary to describing the item.

68.　(Previously Presented)　The apparatus of Claim 64 further comprising:

　　a first and a second memory structure, wherein

　　　said means for storing the first record performs said storing to the first memory structure, and

　　　said means for storing the second record performs said storing to the second memory structure.

69.　(Previously Presented)　The apparatus of Claim 68 wherein the first and second memory structures are distinct from one another.

70.　(Previously Presented)　The apparatus of Claim 68 wherein the first and second memory structures are tables in a database.

71.　(Previously Presented)　The apparatus of Claim 64 wherein the associated attributes are metadata of the class.

72.   (Previously Presented) A system comprising:

a processor;

a memory, coupled to the processor, storing instructions executable on the processor to

associate an item with a class, wherein

the class comprises associated attributes that describe members of the

class, and

the instructions to associate the item further comprise instructions to select

the class such that each associated attribute has a non-null value in

describing the item;

store a first record associating the item with the selected class; and

store a second record associating the item with each associated attribute of the

class and a value of the attribute describing the item.

73.   (Previously Presented) The system of Claim 72 wherein the instructions to select

the class further comprise instructions executable on the processor to:

select the class from a class hierarchy, wherein the class hierarchy comprises

child classes and associated parent classes, and

a child class inherits each attribute of the associated parent class.

74.   (Previously Presented) The system of Claim 73 wherein the associated attributes

of a child class further comprise an additional set of attributes not inherited from the associated

parent class.

75.   (Previously Presented) The system of Claim 74 wherein the instructions to

selecting the class further comprise instructions executable on the processor to:

determine a class in the hierarchy that has associated attributes necessary to describing

the item.

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76.   (Previously Presented) The system of Claim 72 further comprising:

a first and a second memory structure;

the instructions to store the first record perform the storing to the first memory structure, and

the instructions to store the second record perform the storing to the second memory structure.

77.   (Previously Presented) The system of Claim 76 wherein the first and second memory structures are distinct from one another.

78.   (Previously Presented) The system of Claim 76 wherein the first and second memory structures are tables in a database.

79.   (Previously Presented) The system of Claim 72 wherein the associated attributes are metadata of the class.

80.   (Previously Presented) A computer-readable storage medium comprising:

a first set of instructions, executable on a processor, configured to associate an item with a class, wherein

the class comprises associated attributes that describe members of the class, and

said first set of instructions further comprises a second set of instructions, executable on the processor, configured to select the class such that each associated attribute has a non-null value in describing the item;

a third set of instructions, executable on the processor, configured to store a first record associating the item with the selected class; and

a fourth set of instructions, executable on the processor, configured to store a second record associating the item with each associated attribute of the class and a value of the attribute describing the item.

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81.　(Previously Presented)　The computer-readable storage medium of Claim 80 wherein the second set of instructions further comprises:

a fifth set of instructions, executable on the processor, configured to select the class from

a class hierarchy, wherein the class hierarchy comprises

child classes and associated parent classes, and

a child class inherits each attribute of the associated parent class.

82.　(Previously Presented)　The computer-readable storage medium of Claim 81 wherein the associated attributes of a child class further comprise an additional set of attributes not inherited from the associated parent class.

83.　(Previously Presented)　The computer-readable storage medium of Claim 82 wherein the fifth set of instructions further comprises:

a sixth set of instructions, executable on the processor, configured to determine a class in

the hierarchy that has associated attributes necessary to describing the item.

84.　(Previously Presented)　The computer-readable storage medium of Claim 80, wherein

the third set of instructions is further configured to perform said storing the first record to

a first memory structure, and

the fourth set of instructions is further configured to perform said storing the second

record to a second memory structure.

85.　(Previously Presented)　The computer-readable storage medium of Claim 84 wherein the first and second memory structures are distinct from one another.

86.　(Previously Presented)　The computer-readable storage medium of Claim 84 wherein the first and second memory structures are tables in a database.

87.　(Previously Presented)　The computer-readable storage medium of Claim 80 wherein the associated attributes are metadata of the class.

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